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Created in 1849, the Department of the Interior—America's department of natural resources—is concerned with the management, conservation, and development of the Nation's water, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

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COVER

Following almost on the heels of the Lewis and Clark expedition came the mountaineers, the beaver trappers who first explored remote valleys of the West in search of valuable beaver pelts. Fortunes were made, and lives were lost, until the coming of the silk hat brought an end to the mountaineers's era. For more on this colorful story, see the article beginning on page 4.

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DEPARTMENT OF THE INTERIOR
Stewart L. Udall, Secretary
BUREAU OF LAND MANAGEMENT
Karl S. Landstrom, Director

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Rebuilding the Range

Over many areas of the West, sagebrush is a relatively recent invader that followed years of abuse and misuse. When the native perennials were cropped close to the ground, sagebrush moved in. Now, with giant scrapers and cutters and harrows, the Bureau of Land Management is attempting to rebuild much of the potentially productive lands by removing sagebrush. In the wake of sagebrush control comes reseeding, and the land is once more productive. Some sagebrush areas have higher value as browse and wildlife habitat, however, and BLM selects areas for sagebrush removal and treatment with great care—and due consideration for the role of wildlife in a program of balanced use of the range.



The Beaver and the Mountainmen

by Harvey Shapiro

IF WE could turn back the pages of history to an early fall day in 1830 and look in on a scene on the banks of the Wind River in what is now Wyoming, we would witness one of the most fantastic gatherings of the old West. Before us is a scene of utter confusion, hubbub.

We can see three sorts of people: trappers or mountainmen, Indians, and traders. Part of the confusion is the result of haggling between the traders and the trappers and Indians on prices for beaver pelts. The rest of the confusion comes from the trappers, who are not wasting any time in spending their new wealth.

A fistfight, with a small but enthusiastic audience, threatens to disturb the economic activity of a St. Louis trader and an Indian. Not far away, in a small tent, is a high-stakes poker game which may not be entirely honest.

A trapper is telling some others about his adventurous year in the mountains, and his laughter-broken sentences are punctuated by the reports from a rifle contest on the edge of the field. Sometimes we have noticed shots at more serious targets than bottles—and sometimes they do not miss.

Slabs of greasy meat are fried in open skillets under the blazing sun. Whiskey abounds.

We are watching one of the 16 rendezvous of the western fur trappers and the eastern fur trading concerns. All winter these men have been in the uncharted forests and mountains from the headwaters of the Missouri to the Pacific, trapping beaver.

Now at their rendezvous, which is something like a

rough-and-tumble country fair, the mountainmen have 5 days in which to sell their furs and enjoy themselves before returning to another year of wilderness.

The mountainmen met like that 16 times. Sixteen weeks of wild confusion and garish pleasure, and it was over. Something as seemingly innocuous as the invention of the silk hat put an end to it.

In 1832 someone who had never gone fur trapping by unknown streams invented the silk hat. Until then, ladies and gentlemen of worth in the East and in Europe adorned themselves with the plentiful western fur harvest. But when the worthy people turned to silk, the heyday of the wonderful breed of mountainman came to an end.

They were the first men into those regions; they came before the pioneer. At the largest rendezvous, there were only a few hundred white men, but they left a record that will not be forgotten by their country. Some, like Carson, are known by name to everyone; some, like Pattie, should be.

They came in search of the beaver. The beaver is huge for a rodent—60 to 70 pounds. His winter coat is one of the most luxurious furs in the world.

But the beaver is more than a former provider of luxury for the rich of the East and Europe. The beaver is a master engineer of dams and houses, an engineer whose works play an important part in the conservation of forest and water resources.

With his large teeth and powerful jaws, the beaver can hew down a tree as much as 60 inches in diameter. Though his house, or lodge, looks like a large pile of sticks in a pond, it is a solid and intricately constructed

half-submerged chamber. The entrance is under the surface, and the main chamber of the lodge is split-level.

The raised level is the sleeping area, kept dry and covered with soft bedding. The lower portion is storage space and general living quarters.

But a greater feat than the beaver's lodge is his dam. Built to maintain the stream pond at a constant depth, the dam may be 100 feet long, though only 4 or 5 feet high. Hydraulic engineers of the first order, beaver know when to open small spillways in their dams to prevent floods, and when to close these spillways.

The beaver's diet is the bark of hardwood trees. During severe winter, the warm-coated animal lives entirely in his lodge, never emerging from his ice-covered pond. He subsists on a supply of bark-covered twigs, which he has collected from the stream banks during the fall months.

The beaver's building accomplishments are more than a mere curiosity. The beaver is an important part of nature's scheme of things in the woods. The beaver dam and controlled spillways are a vital part of natural water control. Breaks in beaver dams have

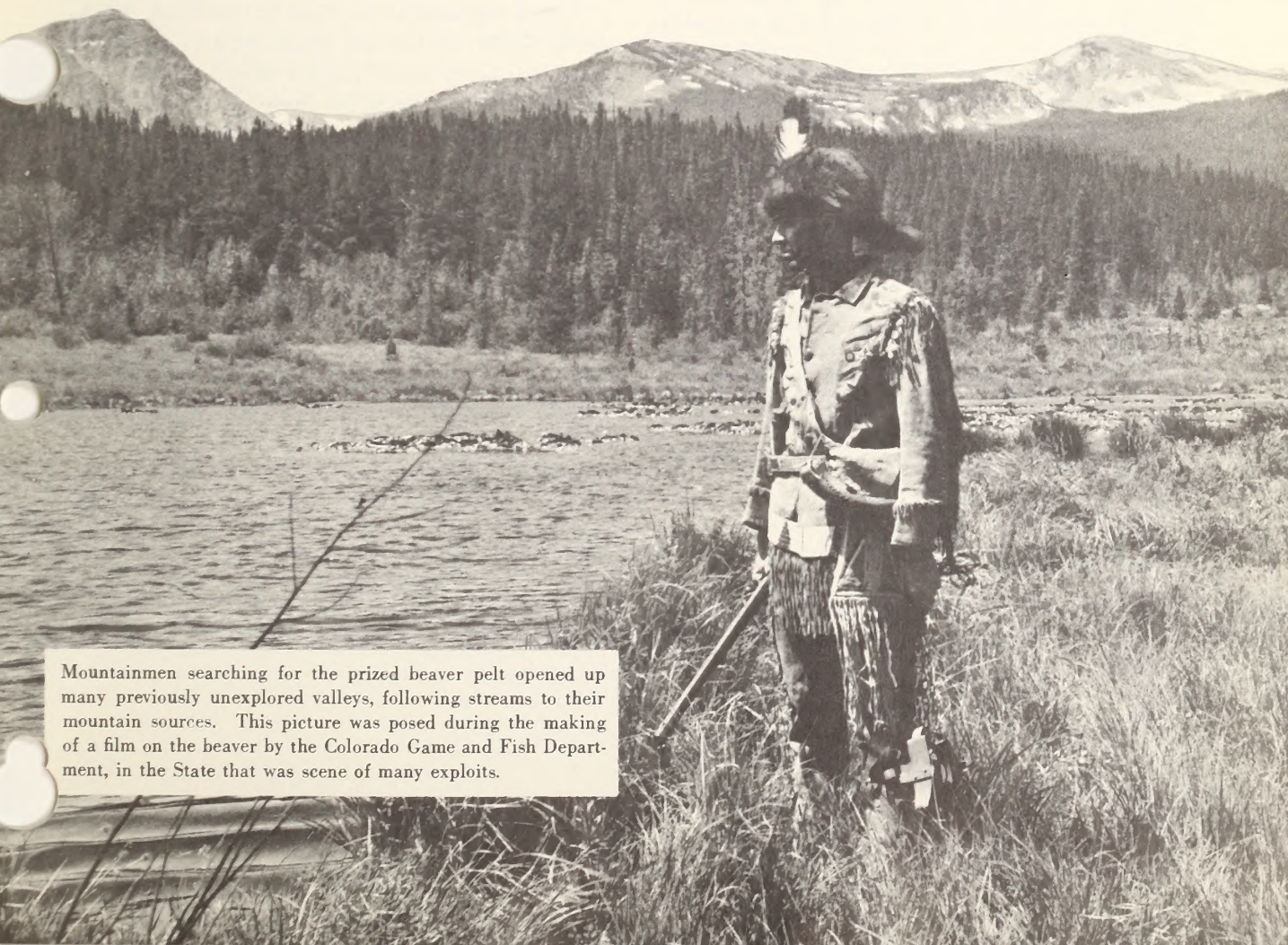
caused floods that have washed out railroad tracks and bridges.

Beaver ponds drive back the forest, creating meadows when dams are deserted and the ponds recede. The decaying vegetable matter at the bottom of these ponds creates wonderfully rich soil. Many a farmer owes his livelihood to former beaver dams.

But despite the beaver's intelligence and good works, the last three centuries have been stark tragedy for him. Once beavers ranged in abundance from the Arctic Circle to northern Mexico. Today they are commercially abundant only in relatively small areas around the Hudson Bay, and in the Rocky and Sierra Nevada Mountains.

The pressure of constant trapping may have changed the very habits of the beaver. Early in the 17th century, explorers wrote that the beaver worked by day and slept at night. But for hundreds of years the beaver has dared come out only at night.

The slaughter of the beaver for his valuable fur has been appalling. In 1854, 509,000 pelts were taken! The average for the years 1860-1870 was



Mountainmen searching for the prized beaver pelt opened up many previously unexplored valleys, following streams to their mountain sources. This picture was posed during the making of a film on the beaver by the Colorado Game and Fish Department, in the State that was scene of many exploits.

150,000, and it is estimated that Indians took at least that number for their own uses.

So important was the beaver that his pelt became the currency of vast areas of the frontier. Wars and bloodshed over beaver rights were not uncommon. The beaver was the gold of the great forests of North America.

The quest for the beaver's pelt drew the mountainman to explore the West from the ever-moving frontier to the Pacific. The beaver, always intelligent, moved away from signs of human life, moved steadily westward, into the more rugged and forbidding wilderness, drawing the intrepid mountainman after him.

The mountainman dressed in buckskin like the Indians, and wore his hair and beard long. His food stores were limited to small portions of sugar, coffee, and tobacco. He shot most of his food. Since he would be out for a year, he had to travel light.

The mountain trapper could make his tobacco last longer by mixing it with the bark of the red willow, but most comforts were not to be his.

Whatever small luxuries he may have had, his essential comforts were a rifle, a pistol, a huge knife, six or eight traps, and a buffalo robe and blanket bedroll.

The wealth of our trapper's four- or five-man party could be measured by the number of horses and Indian squaws in their service. But if he fell on evil times, the trapper did not hesitate to eat berries or desert rattler, though he would not be driven to such extremities unless he could not hunt.

Taos, the most northerly of the old Mexican settlements, was famous as a supply base and had ample provision for recreation. Many trappers settled in Taos with their Mexican wives after the silk hat ruined the beaver industry.

Another important trapper meeting place was Bent's Fort, built by William Bent, a widely known trader, in 1828. The fort, located on the Arkansas River near what is now La Junta, Colo., had cactus crowning its walls as living barbed wire. Bent offered fair prices for pelts, and free lodging for all who needed it.

The mountainman's trade was by no means a soft one, as we have seen. There was hardship. There was loneliness. There was competition—competition to be the first to the rendezvous with the best furs for the traders. And then there was danger. Perhaps the best way to paint a picture of the dangers facing the early trappers and mountainmen is to tell some of their stories.

Rufus Rockwell Wilson tells the story of Sylvester and James Pattie in his article "Mountain Men." In 1824 Pattie and his son James joined 100 men bound

for the beaver country beyond Santa Fe. On their journey they saw elk, buffalo, and grizzly bear. A grizzly mortally wounded one member of the party.

September of 1827 saw father and son again on the trail, this time near the Gila and Lower Colorado Rivers. After a quarrel, the Patties and six other men separated from the main party, and floated down the Colorado in dugout canoes.

They were told by natives that there was a Mexican settlement at the mouth of the river. But all they found was a salt and sandy waste.

They set out over this waste and in March finally reached the mission of Santa Catalina. But for some reason they were arrested and sent to prison in San Diego. There Sylvester Pattie died, and his son never forgave his captors.

At last able to secure his own release, James returned home to Kentucky. His adventuresome days were not over, however, for we know that he died in California during the gold rush.

Wilson also tells the story of Jedediah Strong Smith, in command of 12 picked men sent across the Great Divide by William H. Ashley, a leading citizen of the new State of Louisiana. The year was 1823; the objective was beaver.

A little southwest of the Black Hills of South Dakota, leader Smith was suddenly attacked by a grizzly bear. Smith was badly clawed and had several ribs broken in the attack, but he stood the crude surgery performed by his wilderness companions without a word.

Ten days later they were on their way again, and found plentiful beaver on the Powder River. They reached the Great Divide in March 1824, and found the rich fur fields that were to make Ashley a rich man in 3 years.

But Smith was not destined to be so fortunate as Ashley. In May of 1831 Smith was at the head of an 87-man caravan crossing the Jornada Desert beyond the Arkansas River.

The beaver is important for more than just their influence on the early exploration of the West. Nature's engineers, the beaver dam small streams to provide ponds for their homes, then build houses of logs, sticks and mud. By damming small streams near their headwaters, beaver have helped maintain stable stream flows, providing water sources during dry weather.

The group was under severe attack from thirst, wind, and sun. Smith and a companion were exploring for water. When Smith's trained eye saw in the distance what appeared to be either a spring or a water course, he left his companions to investigate. No one ever saw him again. The main body of men found the water that saved their lives in the direction he had taken.

Later, when they reached Santa Fe, some Mexican traders showed them Smith's rifle and pistols, bought from a band of Comanches.

The story of John Colter, trapper and scout, has often been told and is worth telling again. In 1808, Colter was trapping on the Jefferson River with a man named Potts. Canoeing down the river they were somewhat taken aback to notice 600 hostile Blackfeet waiting for them on the bank.

The Blackfeet were quite angry with Colter, for he had helped the Crow Indians in a war against them.

Colter decided to land and appeal for mercy, but Potts chose to flee. As Colter later put it, Potts was "made a riddle of" by arrows.

Now Colter was left alone with his captors, whose language he could understand to some extent. Someone proposed that they give Colter a run for his life.

Given a 400-yard advantage, Colter started for the Jefferson River after having been walked 6 miles from it. Hundreds of Blackfeet pursued him.

Now, had the Blackfeet known that John Colter had never been equalled as a runner, they might have chosen to treat him differently.

Heart pounding, naked feet and legs bleeding, a mile from the river, Colter glanced behind him, to see a lone spearman, steadily gaining.

A mountainman had to have brains as well as stamina. Colter stopped suddenly and turned in his tracks. Shocked, the Indian stumbled and fell, and Colter dispatched him with his own spear.

Reaching the river, Colter plunged under a little floating island of driftwood. The enraged Blackfeet never chose to look for him there, though they spent some time searching the bank.

Colter stayed in his hiding place until nightfall, and then, armed with the spear and covered only in a blanket, Colter walked the hazardous and incredibly difficult 300 miles to civilization in 7 days, living on roots, and with instinct as his only navigator.

Mountainmen like John Colter spearheaded the entire frontier development of the United States. Experiences like his ingrained stamina, self-reliance, and rugged creativity into the American spirit.

Yet, though what he did for the American frontier and for the American spirit is of inestimable importance, today the mountainman is no more. The beaver has survived his hunter, and the necessity of protecting the beaver and increasing his numbers is becoming more and more clear. The beaver is an invaluable ally in America's struggle to protect her natural resources, just as the mountainmen were an invaluable ally in America's struggle to find her spirit.





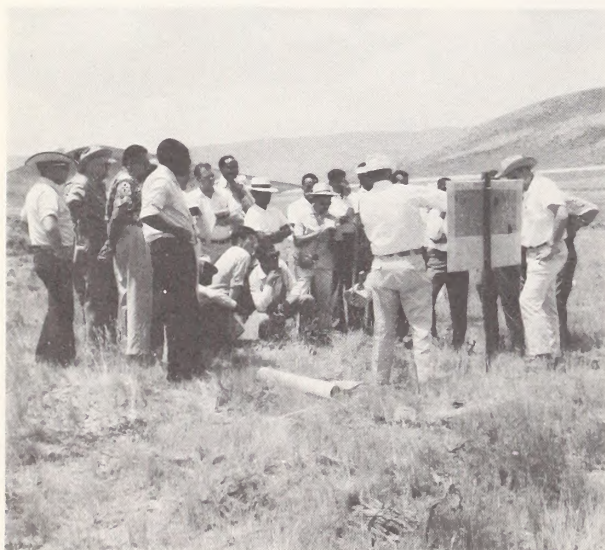
an international tour

Sharing Our Know-How

A GROUP of agricultural and land experts from 10 foreign countries spent 6 weeks this summer looking at land management and land tenure problems in the United States. Hosts for the tour were the Departments of the Interior and Agriculture, and the Agency for International Development.

The tour was arranged to help the visitors learn highlights of the land management program in the United States, to help them plan their own programs at home. They examined the results of the Homestead Act of 1862, for example, to see first-hand how public land can be transferred for development by private citizens.

The farm and land specialists spent several days looking at the results of the Bureau of Land Management's range developments in Colorado as part of their tour.



Above: Visitors on the international tour were given a chance to see some of the country during their stay in Colorado, with horses providing real Western transportation into some areas. *Left:* All was not play, as the group studied range conditions in the field with Bureau of Land Management range conservationists and soil and moisture experts explaining programs.

CONSERVATION BRIEFS

...FROM THE BUREAU OF LAND MANAGEMENT

New Assistant Director, Division Chiefs Appointed

Eugene V. Zumwalt has been appointed Assistant Director for Range and Forest Management, succeeding the late Gerald M. Kerr. Filling Zumwalt's former position as Chief, Division of Forest Management, is Edwin Zaidlicz. Leon R. Nadeau has been appointed Chief, Division of Range Management. All three are long-time career employees of BLM.

Interior States Right-of-Way Policy

The Assistant Secretary of the Interior has asked State highway officials to consult bureaus of the Department during early stages of their planning to avoid conflicts between highways and important areas of public land management. He placed emphasis on conservation uses of certain public lands, including parks, wildlife refuges, and Federal fish hatcheries. The Department recently granted authority for its agencies to deal directly with the Bureau of Public Roads and State highway departments in making adjustments where right-of-way conflicts arise.

Public Land Moratorium Lifted in Remaining States

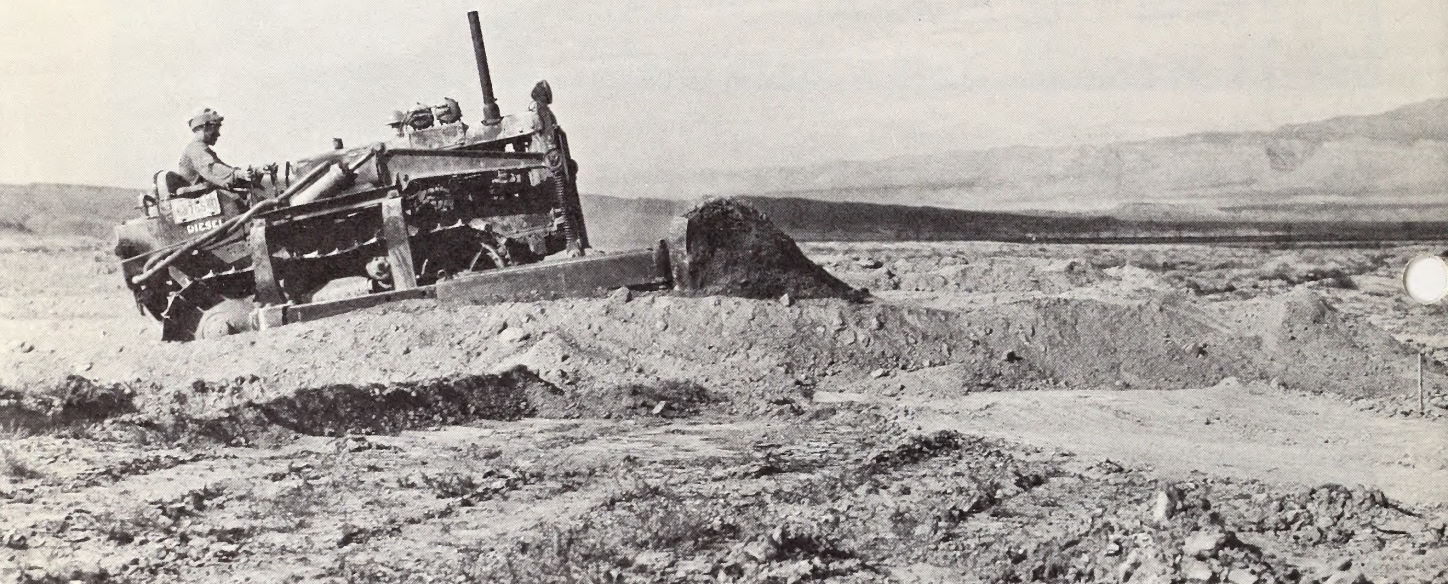
An 18-month moratorium on nonmineral applications for public lands ended September 1 in Arizona, California, New Mexico, Nevada, Idaho, Oregon, Utah, Washington and the eastern States (where there are less than 100,000 acres of public lands). Secretary of the Interior Stewart L. Udall declared the moratorium in February 1961 when nonmineral applications had created a tremendous backlog in BLM's land offices.

House Passes Petrified Wood Bill

As this issue went to press, the House of Representatives has passed and sent to the Senate a bill that would take petrified wood out of the category of minerals subject to appropriation under the mining laws. The bill would authorize the Secretary of the Interior to make regulations under which limited quantities of the fossilized material could be removed without charge. See page 16 of this issue for story on rockhounding for "wood".

Federal Grazing Rules Extended to Section 15 Lands

New rules were announced this summer for crossing permits and reimbursement for unauthorized use on some 26 million acres of Federal lands not in grazing districts. Lands affected are so-called "Section 15" lands administered by BLM but not included within grazing districts established under the Taylor Grazing Act of 1934. The new rules extended the same charges to section 15 lands that had been applied to lands within grazing districts.



Young men enrolled in the CCC were given opportunities to learn such trades as heavy equipment operation. This scene was taken between Castle Valley and Woodside, Utah, in 1940.

The CCC—20 Years Ago

AS the Nation moved into the first summer of World War II, many peacetime programs were laid aside for the duration. Manpower, one of the most essential resources, was being channeled into military production and the Armed Forces. Thus, on July 2, 1942, Congress ordered the end of the Civilian Conservation Corps.

A year later, according to a report to the Secretary of the Interior, all but a few odds and ends had been disposed of.

The fact that this was not the end of the many achievements of the CCC, however, is attested even today in many areas of the West where truck trails, water detention structures, recreation facilities, bridges, and other projects are still being used 20 years after the camps were disbanded.

And during the years that followed the end of the

CCC, men who had learned to operate trucks and tractors, radios and transits, carried their skills to war, and to the peace that followed.

After the war, under the impetus of the GI Bill, veterans who had first learned the meaning of "conservation" in the CCC on the range lands and in the forests went back to school and became professionals in the fields they had come to love.

Born of a Depression

The Civilian Conservation Corps was born in the darkest days of the Depression, "for the purpose of relieving the acute condition of widespread distress and unemployment now existing in the United States, and in order to provide for the restoration of the country's depleted natural resources . . ." This act



Not all work was done by machinery. Here a group of enrollees work in a gravel pit on the Honey Lake Grazing District in California, digging material for road-building.

was signed in to law on March 31, 1933, and was known as the Emergency Conservation Work Act (ECW).

Among the first to take advantage of this new reservoir of manpower were the Bureau of Land Management and the National Park Service, with both operating camps in 1933.

Actually, the CCC wasn't established until more than 4 years after the ECW program began. The Act of June 28, 1937, gave the program its name, and provided for a continuing program of conservation on the public lands.

When the CCC was organized in 1937, within the Department of the Interior there were already some 460 ECW camps operated by the Bureau of Reclamation, the National Park Service, and the Bureau of Land Management (then the General Land Office and the Grazing Service).

The CCC camps were located across the Nation, with 200-man units located in areas where work most urgently needed doing. And work was needed from the Virgin Islands to the Pacific, north to Alaska and westward to Hawaii.

This was no make-work operation, no summer camp for idle youth. Enrollees were paid \$30 per month for hard back-breaking labor, but it was labor with a satisfaction.



Enrollees came from all over the Nation. This draftsman, from New York City, developed his talents at a camp near Dalton Wells, Utah, drawing plans for CCC construction projects.

The CCC—20 Years Ago

Work for the General Land Office

One of the Bureau of Land Management's predecessor agencies, the General Land Office, stated in its final report on the CCC that its participation was "a small part of the entire CCC program, but the achievements in the conservation of resources, both natural and human, are almost beyond comprehension."

One of the first camps established was in the Little Thunder Basin in Wyoming, where outcrop fires in the coal beds on the public domain had been burning since the earliest recorded history of the area.

In 1938, three CCC camps were assigned to the O&C lands of western Oregon. With two more camps added the following year, approximately 1,000 men were available to provide physical improvements, forest protection, and reforestation. The report credited the CCC firefighting crews with preventing the devastation of untold acres of highly valuable forests.

Alaska Indians and Eskimos were employed in Alaska, building sanitary and water supply facilities, schools, roads and trails. Their work was done from Atka in the Aleutian Chain to Eagle on the Upper Yukon River.

Work for the Grazing Service

By November 1938, the Grazing Service was utilizing 90 camps of 200 men each on 58 grazing districts in the Western States. With the Taylor Grazing Act only 4 years old, the Grazing Service was faced with

Making the most of available water, CCC enrollees developed springs to provide water for livestock and wildlife. This project was in the Virginia City Grazing District of Nevada.



During the Thirties truck transportation was just beginning to assume real importance in some ranching areas of the West—and truck trails such as this one in Mason Valley, Nev., was a most significant project of the CCC.



a multitude of problems on some 142,000,000 acres of land—roughly the size of six New England States, plus New York and Pennsylvania for good measure.

The enrollees built numerous stock-watering facilities, including earthen reservoirs, spring developments, and wells. These allowed grazing to expand into vast areas where forage was relatively rich but available water was scant.

Truck trails, stock trails, and stock driveways constructed by the CCC totaled thousands of miles. Many of these primitive roads have since been improved, bringing "the school, the church, and the library nearer to the ranch."

A bridge across the Little Colorado River was built by the enrollees from a Green River, Wyo. camp to open up a vast area of seasonal range to conserve both range and stock.





Training for Professions

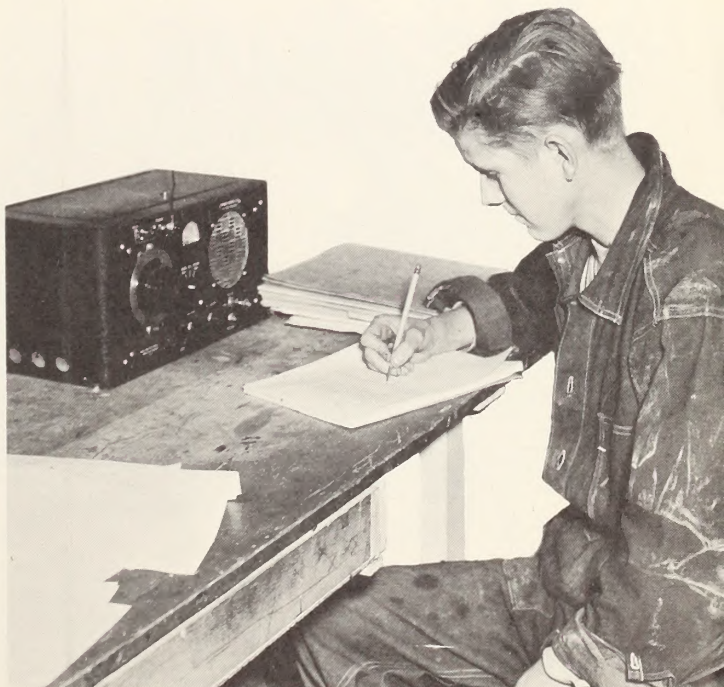
The final report to the Secretary cited some additional benefits from the CCC program, in addition to the land conservation measures accomplished. The enrollees learned the rudiments of many professions as they went about their work. Range and land surveys, mapping, and equipment operation were but a few of the skills taught by the CCC.

For some of the youth, whose opportunity for education 30 years ago had been extremely limited, the CCC meant a chance to learn to read and write.

Fencing and cattle guards were important innovations on the grazing allotments then being established under the Taylor Grazing Act. This cattle guard was in Mason Valley, Nev.

Continued on next page—●

An enrollee at the CCC camp near Bridger, Montana, learned radio operation. Many of the skills learned during the CCC days were soon to be used in a war that ended the program.



The CCC—20 Years Ago

A Youth Conservation Corps

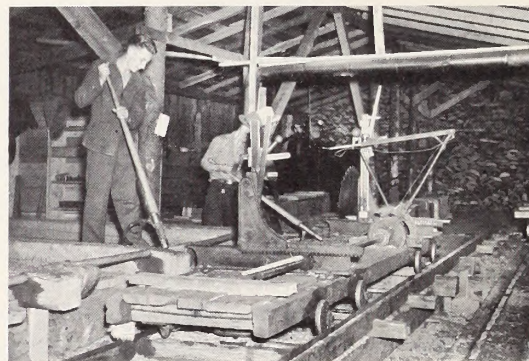
Today, 20 years after the end of the CCC, a similar program is being discussed for today's youth. The idea of a postwar youth conservation corps was proposed in the final CCC report to the Secretary, written by Conrad Wirth, now Director of the National Park Service.

His report, published in the crucial days of January 1944 spoke eloquently of a need that continues today: "The Nation cannot afford to have its resources neglected or wasted; they must be protected at all times. Their extra values are only now being realized in the world-wide struggle for freedom and liberty. It will take years to restore replaceable resources now being spent so freely to win the war. This can be done only by careful planning and hard work."

A side camp in Alaska was set up during improvement work at Mount McKinley. Camps such as this were used only for temporary quarters for men sent on short-term projects.



Besides learning and using skills such as sawmilling (below), the CCC youths enjoyed personal development during their off-duty hours, with reading rooms and other camp facilities.





Above: Trench reservoirs such as this, built by the Alkali Lake Camp, Oreg., helped conserve valuable rainfall for use during drier weather by livestock and wildlife on the range.

Below: Reseeding the range near Dry Valley, Utah, enrollees learned some of the basic principles of range management. Some enrollees later became professionals in conservation fields.



Above: Enrollees beautified their camps, gaining satisfaction from spending free hours improving their appearance.

Below: Carpentry skills were developed when enrollees from an Alaskan camp built this cabin at Mount McKinley Park.





A Unique Resource

Rockhounding for Petrified Wood

THE sudden summer storm lashed at the trees clinging to the steep hillside. Below, the usually placid creek turned in to a raging river. The huge sequoia, which had withstood hundreds of years of such battering by the elements, suddenly toppled and fell into the river bed. When the sun finally gleamed through the disappearing clouds, the tree was buried under tons of mud and silt.

As the months passed, the giant trunk was covered with more and more layers of debris.

As the years passed, silica seeped from the volcanic ash contained in the mud, gradually replacing the organic fibers of the old sequoia.

As the eons passed, the original wood of the tree was completely dissolved, and in its place lay a fossilized relic, in which the delicate pores and rays were represented by colorful patterns of opal and chalcedony.

And as the ages passed, the stream bed gradually

rose along with the surrounding hills, and thousands of centuries of rain and wind carried away the softer oils and rocks.

Today, the silicified trunk of the old sequoia lies exposed on a hillside once more, now impervious to the occasional rains that fall. Now it's "petrified wood," although really it is not petrified, and it is no longer wood.

Sometimes entire forests were covered with mud, as landslides scoured downward. The steep mountain-side south of Lamar River in Yellowstone National Park reveals more than 15 different forests—sequoias, pines, chestnuts, and plane trees—superimposed one upon another.

Ages of the deposits vary, but among those on the national land reserve are remains of trees that grew some 160 million years ago, in the Triassic period when northern Arizona was covered by a lush tropical forest.

Tools of the ardent rockhound include hammer and pick, a feed sack for carrying the prizes, and a side-arm for protection against rattlesnakes. Also shown are some agate specimens.

Depending on the dissolved minerals that replaced the wood, the relic may be agatized or opalized. These rarer deposits are especially prized by "rockhounds," who make a hobby of collecting specimens to cut. With a high-speed lapidary wheel, the field specimen can be polished to reveal the color and pattern of the mineralization.

Rockhounding as a hobby has grown tremendously during the past few years. Searching the back country in summer, and with inexpensive cutting and polishing equipment to occupy their winter hours, rockhounds now far outnumber the more serious prospectors seeking commercially valuable minerals. Last year, for example, 50,000 rockhound visits were recorded in the Prineville, Oregon, area.

While deposits of "petrified" wood are found in most States, some of the most interesting—and most valuable from the viewpoint of the rockhound—are found on the national land reserve. And here, until recently, the deposits have been subject to indiscriminate exploitation by commercial as well as amateur prospectors.





Showing off a prized chunk of agatized material, these rockhounds have found the remains of a tree that grew here many millions of years ago—now preserved as “petrified wood.”

While the greatest participation numerically is from strictly amateur rockhounds, there is a commercial side too. In some areas of the national land reserve, enormous quantities of silicified materials have been removed by the truckload, often with the aid of dynamite and bulldozers. End products are tourist souvenirs, outdoor table tops, and other ornaments. Smaller pieces of agatized “wood” are cut and polished to be sold as jewelry.

Exploitation of “petrified wood” by commercial souvenir merchants has had many ramifications. The Petrified Forest National Monument, covering 40 square miles of deposits in northern Arizona, was set up to provide protection for one significant area as early as 1906.

Since “petrified wood” is for all practical purposes a nonrenewable resource, valuable for recreational purposes of thousands of amateur rockhounds, the Department is now considering withdrawal from mining entry of several significant deposits.

Meanwhile, Secretary of the Interior Stewart L. Udall has ordered an inventory of the significant deposits of fossilized wood, and has authorized the Bu-

reau to set the most important ones aside—closing them to claims under the mining laws.

In withdrawn areas, however, individual rockhounding will continue to be permitted—and in fact, will be encouraged.

At the same time, the Secretary has proposed legislative measures that would give this resource further protection by removing “petrified wood” from the list



Rockhounds have become an important factor in the tourist industry in many areas, combining their hobby of searching for rocks with camping, fishing, boating and other sports.

of locatable minerals. This would mean that commercial users of the material would purchase the material, instead of claiming them under the old mineral laws. Better utilization would result, it is thought, with a fairer return to the Federal Government through competitive bidding.

The legislative proposal would not “lock up” the deposits, but rather would preserve them for greater use as a recreational resource. Commercial users would not be denied sources of supply; they would simply be required to gather their materials from deposits of lesser recreational significance under the supervision of the Bureau of Land Management.

Because of the widespread interest of rockhounds in collecting silicified and other kinds of “wood” Secretary Udall has issued an appeal to the rockhounds to notify the Bureau of Land Management of all newly discovered deposits that may contain significant amounts of this ancient natural resource.

Preserving A Page from History

THE Bureau of Land Management has recently taken steps to preserve a colorful page from history by fencing off a collection of Indian petroglyphs in Arizona. Secretary of the Interior Stewart L. Udall authorized Arizona State Director Fred Weiler to erect a 6-foot chain link fence around the Painted Rock site near Gila Bend.

For some time historic sites such as Painted Rock have suffered the loss of smaller relics taken by souvenir collectors. But recently, larger examples of irreplaceable relics—boulders covered with ancient petroglyphs of snakes, men, turtles and other figures—were loosened by blasting powder and hauled away in trucks.

Petroglyphs are prehistoric rock carvings, sometimes representing recognizable symbols but are often abstract designs. Early Indians decorated meeting places with the symbols.

BLM officials in Arizona moved quickly to preserve the rocks, saying "There should be no mistake about the intention of the Bureau of Land Management to carry out its duty in protecting public property—neither Arizona nor the Nation can afford willful destruction of items of substantial historic value."

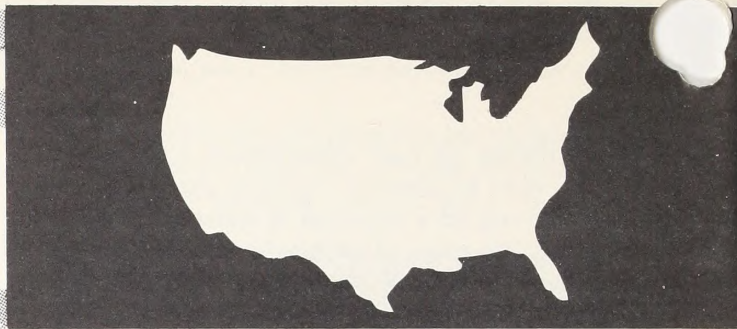
As a further effort to protect these historic values, all BLM State Directors have been ordered to complete an inventory of archeological and historic relics located on areas within the national land reserve.—

Dorothy McDonnell





active acres



Oldest Rock in the West

The age of the oldest rock so far known in the western hemisphere is 3.2 billion years according to Interior's Geological Survey. The age determination was made on the mineral zircon contained in old rocks found in western Minnesota.

The area has been quarried for many years for use as a facing stone on large buildings.

Similar ages of approximately 3 billion years have been reported for minerals in rocks from Africa and from Karelia in the northwestern part of Russia, but until now the oldest mineral known in the Americas is 2.8 billion years.

Nine-point Conservation Program

A new nine-point program calls for major expansions of conservation programs on the lands administered by the Bureau of Land Management. During the next 5 years efforts will be stepped-up to provide recreational facilities, halt soil erosion, and protect forest resources.

The cost of the first 5-year phase of this program will be about \$478 million. During the same period, revenues from the public lands will total about four times as much—almost \$1.9 billion.

Other high priorities in the program are a call for a mod-

ernization of the public land laws, surveys and resurveys of a large portion of the public lands, and improvement of land-tenure patterns. These "mechanics" will permit better protection, expanded soil and water conservation, and better access to public lands.

Among the things planned is the completion of the classification of all public lands. This was begun during 1961 during an 18-month moratorium on nonmineral applications.

Inventories will be completed of recreation lands, forage, timber, and mineral resources on the public lands.

Re seeding and brush control programs will be stepped up and fences and water-control projects will be increased. More than 3,000 miles of access roads are planned before 1967.

Single copies of the "Program for the Public Lands and Resources" are available from the Director, Bureau of Land Management, U.S. Department of the Interior, Washington 25, D.C.

Millions Paid to Oregon Counties

Revenues to the 18 counties in western Oregon entitled to share in receipts from timber sold during the last fiscal year on the Oregon and California Railroad grant

lands were more than 15.4 million. This represents 50 percent of gross revenues from timber sales.

The O&C project, under the administration of the Bureau of Land Management and the Forest Service, is one of the most successful forestry enterprises of the Federal Government. Despite the cutting of more than 10 billion board feet of timber since 1937, the volume of timber on these lands today is greater than when the management program was started.

Indian Job Opportunities Studied

Twelve studies are being undertaken by the Bureau of Indian Affairs to determine the feasibility of new industries and other economic development on Indian reservations and in the native villages of Alaska. The development would create greater job opportunities, it is hoped. The Area Redevelopment Administration of the Department of Commerce is cooperating in the study.

Contracts totaling \$402,493 have been awarded to the lowest qualified bidders for carrying out the studies in 11 States.

Dedication at Four Corners

In cooperation with the Navaho Trail Association, the Department of the Interior organized an un-

usual three-way observance held September 16 at Four Corners where Colorado, New Mexico, Arizona, and Utah meet.

The ceremonies (1) marked the completion of Navaho Route 1, the first all-weather paved road to cross the northern portion of the huge Navaho reservation; (2) dedicated a new monument marking the Four Corners site, which is the only point at which four States meet; (3) observed the successful completion of a 25-year effort by the Navaho Trail Association to construct a primary highway into and through the Indian Reservation country.

The new highway means a greater tourist industry for the new Tribal Parks Program of the Navahos, better access to doctors and hospitals, better educational opportunities for their children, and more rapid economic development and improved relationships and contacts with surrounding communities.

The Four Corners monument was designed by the Bureau of

Land Management, successor to the old General Land Office whose survey crews first marked the spot in 1868.

Range Study Report

The results of a trial public land range study made during the past year by Agriculture's Forest Service and Interior's Bureau of Land Management have been released.

Along with a printed report of the results from areas sampled in Oregon, Montana, and Colorado, the Secretaries of the two Departments sent to the Congress a prospectus for a nationwide public land range appraisal.

The accelerated public land range appraisal would assemble information on all range lands administered by the Forest Service and the Bureau of Land Management using standard procedures. Plans would be made to complete the inventory by 1967.

The sample Federal rangelands in the three study areas had potential capacities ranging from 11 to 41 percent about current capacities.

These potentials serve to show that sizable gains in capacities may result from better management, and range improvements.

Single copies of the full report and prospectus are available from the Director, Bureau of Land Management, U.S. Department of the Interior, Washington 25, D.C.

New Land and Wildlife Management Areas

Three new national cooperative land and wildlife management areas were established by the Interior Department last summer in California.

With lands totaling over 133,925 acres, the three areas in central and southern California will be managed by the Bureau of Land Management for the development, conservation, use and maintenance of outdoor recreation facilities as well as wildlife and other natural resources. Advice and cooperation will be provided by the Department's Fish and Wildlife Service and by the State of California.

The new land and wildlife management areas are in the Clear Lake area of Glenn, Lake, Napa, Yolo, and Colusa counties; the Otay Mountain area in San Diego County; and the Jacumba area of San Diego County.

In setting up the areas, the public lands have been withdrawn from application or entry under the nonmineral public land laws and from entry or disposition under homestead, desert land, and scrip selection laws. The lands will continue to be open to mining and mineral leasing, livestock grazing, public outdoor recreation, and other land uses normally administered by the Bureau of Land Management.

All the national areas have been established primarily for the pro-

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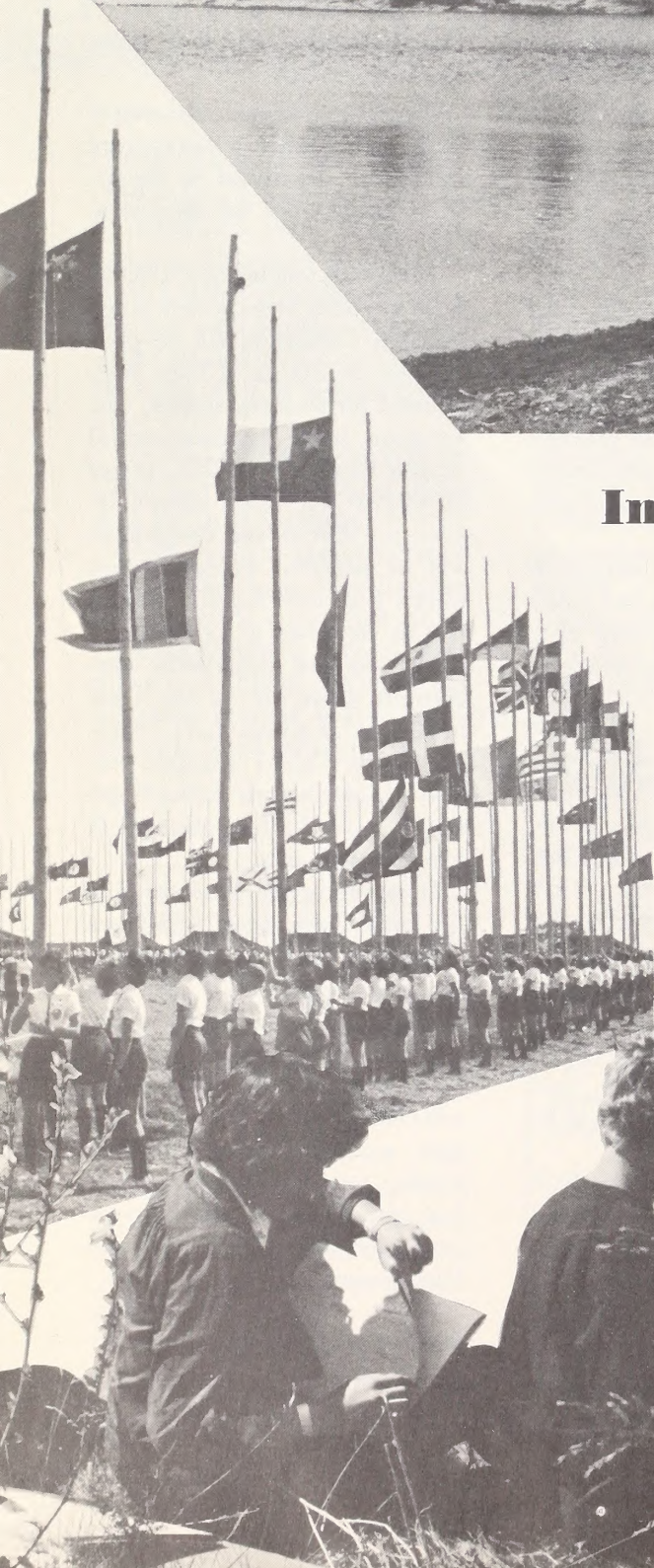




Interior “Scouts” a Roundup

From all over the United States and the world—from Japan, Canada, Holland, Nigeria, Texas, Georgia, Connecticut—the Senior Girl Scouts flocked to Button Bay, Vt., for their National Roundup last July 18–31. On the shores of Lake Champlain, 8,500 girls gathered to swap handmade souvenirs, ideas, and friendships.

The Department of the Interior was there, too, with exhibits, speakers, and songs. They were proud to join the many organizations who helped the Girl Scouts celebrate their 50th anniversary and follow the Roundup theme—“Honor the Past, Serve the Future.”



●—Continued from page 21
tection, development, conservation, and management of native wildlife and outdoor recreation resources.

Eight of these Federal-State cooperative land and wildlife management areas have been previously established in California, making a total 11 areas in California where both outdoor recreation facilities and natural resource conservation are essential to an expanding population.

World Congress on Parks

Delegates from 71 nations came together this year for the first time to discuss the concept of national parks all over the world. Sixteen of the new countries of Africa were represented at the Seattle, Wash., conference in early July.

The conference was organized by the International Commission on National Parks of the International Union for Conservation of Nature and Natural Resources under the chairmanship of Harold J. Coolidge. Interior's National Park Service and the Natural Resources Council of America worked with two United Nations organizations, UNESCO and FAO, in sponsoring the conference.

The theme of the conference was "National Parks are of International Significance."

The purposes, principles, and policies of national parks were discussed, and the scientific, economic, and cultural values. One of the most thought provoking topics was the international cooperation aspects of national parks and reserves.

The Conference passed the following resolution: "The First World Conference on National Parks recommends that for every kind of animal or plant threatened

with extinction an appropriate area of natural habitat be provided in a national park, wildlife refuge, wilderness area, or equivalent reserve to maintain an adequate breeding population, and takes the view that any species so threatened which is not accorded such official sanctuary proclaims the failure of the government concerned to recognize its responsibility to future generations of mankind."

Saline Water Conversion Plants

Two new saline water conversion facilities have been recently begun. Ground was broken for a plant at Roswell, N. Mex., last July 10. A Saline Water Conversion Research and Development Test Station was begun at Wrightsville Beach, N.C., on August 3.

The demonstration plant at Roswell will utilize a forced-circula-

Ground breaking ceremonies on July 10, 1962, marked the beginning of construction of a 1-million-gallon-per-day

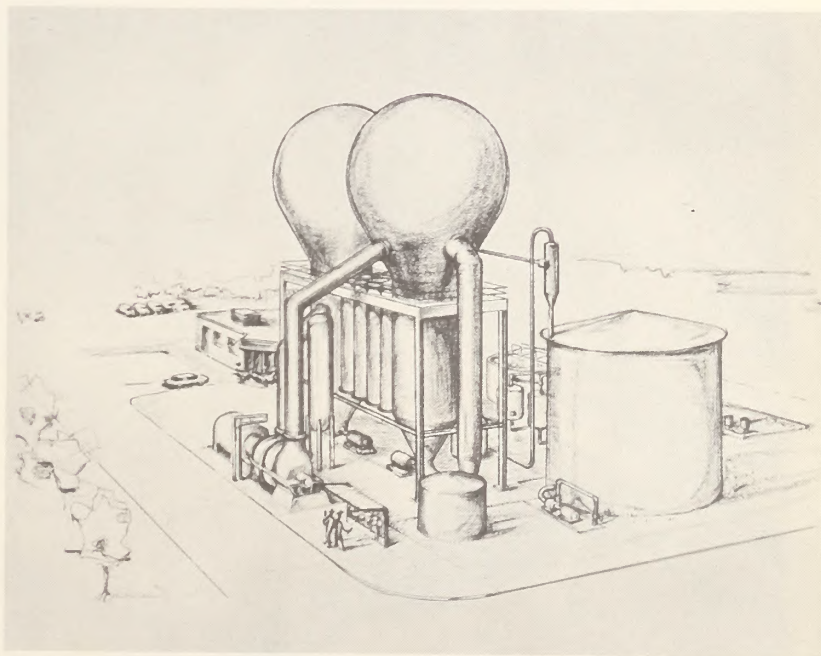
tion vapor-compression process to produce 1 million gallons of fresh water every day from very brackish well water east of Roswell. The plant is to be completed by next July by the Chicago Bridge and Iron Company.

The research and development test station at Wrightsville Beach will provide a location for the future installation, operation, and evaluation of pilot plants in developing new or improved processes. Construction is scheduled to be completed by December 31, 1962.

Contracts for two pilot plants which will be operated at the test station have already been awarded.

In addition to the test station, this land also will be the site for the East Coast saline water conversion demonstration plant, a 250,000-gallon-per-day freezing process demonstration plant.

brackish water conversion demonstration plant at Roswell, N. Mex.



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As winter snows approach, the ptarmigan's summer feathers are replaced by a snowy covering that makes the high-altitude bird almost invisible to predators when the ground is covered with snow. In summer the ptarmigan blends with the grass.

